Saterday
29/11

Thromboembolism

Arterial embolism :-

is a solid mass formed in the circulation early in life.

it affect abnormal artery

~~Prev~~

Prevention By :-

- Aspirin
- Clobidogril
- Ticlopidin
- 2 B 3A glycoprotein inhibitors.

Treatment :-

Arterial or thrombolytic therapy.

Venous thromboembolism :-

The most Common Cause of mortality and morbidity ~~third~~ after IHD & CVA

Mortality rate : 60000 - 200000 per year

Deep vein thrombosis DVT affect about 2 million per year while Pulmonary embolism affect about 600000.

DVT attack about 2 million per year
Pul. embolism about 600 000 per year.

* Risk factor for ~~DVT~~ Venous Thromboembolism :-

1- Heriditory :-

- Protien C resistance.
- prothrombin gene mutation
- Deficiency of anti thrombine.
- increase level of factor VIII
- " " " of hemocystein.

2- aquired

- old age.
- obesity
- Pregnancy
- Malignancy
- major surgery
- nephrotic syndrome
- α_1 antitrypsin deficiency
- pt with pacemaker wire.

* Superficial Vein Thrombosis → mild S.S, treated with NSAID. also called thrombophlebitis.

* DVT → Symptomatic or asymptomatic
50% above popliteal vein
unilateral or bilateral

* D.D of D.V.T :-
- Cellulitis
- ~~arteritis~~ arthritis.
- Chronic venous insuffeciency
- Systemic case of odema :- CCF, Liver failure, hypoalbumineamia nephrotic syndrome
- chronic venous insuffeciency

* Risk of pul. embolism.
* Symptoms ⇒ Hotness, Reddness, pain, immbolization.
"of inflammatory Disorders"

* investigation ⇒ 1- Labratory investigation.
usual
2- D.Dimare ⇒ a subscet of fibrinogen degradation product which is released when cloth is disolved
زبيث دايتغي
Not specific, > 500 IU, Dosn't mean it is D.VT
: Normal اذا طلع ايتغي

3 - Doplex Sonography
4 - Computed axial ~~tonography~~ tomography.
5 - Magnatiec resonace venography

* Treatment :- 1) above the knee → anticoagulent "warfarin" Called: vit.k antagonist
Contraindicated below the knee
If the underly etiology is known use warfarine for 3-6 months.
if Not → use it for a year.

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Half life time :-

- unfractunated Heparine → 2hr
- Low molecular → 12hr } PTT → Protamine zinc surfate 25-50 mg
- warfarine → 2 days → PT → vit k 1-V slowly 1mg + fresh frozen plasma.

PTT portial prothrombin Time
PT prothrombin time

* Pul. embolism :-

- acute medical emergency condition
- Require Rapid evaluation & investigation.

Cause
- very Rare due to Rt side of the hert failure
  ex: Af of Rt atrium.
- as consequence of DVT.

- Types:-

Mild form } mild chest pain + breathlessness
Moderat " }

"massive" acute " → Look ill Tachypnic Tachycardia
Sweaty cold extremities, central cyanosis, accentuation of second
loud pul. sound ← H.S. , S_3, S_4 "gallob", ↑JVP
due to pul. H.T
Rt venticular Heave. ↓U.O

severly dyspnic, cyanosis,
Sever Pain pre shock or shock state.

- Becarful Differentiate b/t pul. oedema, pul. embolism
- Avoid to give Diuretics to pul. embolism PT ⇒ lead to Death.
- Instead you have to prescribe I.V fluids.

RBOT

D.D.:-

- ACS.
- Pericarditis
- pneumothorax spontaneous or tension.
- COPD
- costeocondritis
- aortic dissection.

Para clinical investigation:

[1] - bl. test.

[2] - x-ray finding ⇒

1) ↓ pul. vascular marking "oliger"
2) waster-mark signs.
3) elevation of hemidiaphragm due to loss of bl. volume

* ventilation - perfusion mismaching ↑ volume ↑ / mechanical obstruction of main pul. artery of RBOT

4) Pul. opa obacities. at apex
5) Rt - Descending pul. artery Dilatation "Palla's Bollus sign" Normal 17 mm.
6) pleural effusion "Heamorrhagic" if infarction ↑

[3] - ECG:-

1) Sinus Tachycardia 120-140.
2) Rt. axis deviation ~~5) Rt. BBB~~
3) p. wave of high voltage in lead II reflect AV disfunction
~~4) S_1, Q_3, T_3 classical finding~~
~~5) Af, A flatter.~~

4) R.B.B.B complete or not
6) A.F, A. flatter
5) $S_1 Q_3 T_3$ classical Finding.

[4] D. Dimere → but not specific.

- Newelebide CT scan " perfusion - ventilation " mismatch.
  " Blind CT scan "
  see → cut of pul. artery.

- Spiral CT scan → with I.V contrast.
  Helical " "
  90% specific & sensitive.

- Pul. venography → Diagnostic
  see filling defect in two projection views

Treatment :-

1 - O_2 inhalation
2 - Morphine analgesic 2.5 - 5 mg I.V slowly

Heparine → Retardation of further thrombus formation not tentant & inDirect action → activation of fibrinolytic system.

3 - anti Cagulent

4 - thrombolytic therapy   Treatment of choice.
- Streptokinase 250 000 Unit during half an hour.
  1000 U / hr / 24h.
  ≈ 2,400,000 كامتوحةأاعرسة

5 - I.V fluid.
1000 - 5000 N/S. To increase filling pressure.
ionotropic " dopamine "

Cleveland
~~Cliftane~~ Bord Review

في انسداد لازم نفكه بزيادة Volume
اوحى باستخدام دوبامين

Silent chest at pul. odema غيزها من
Normal Sline ← 2000 – 1000 مقاسات

The increase of U.O is a good prognostic.

Differentiation b/t Pul. odema , Pul. embolism

	embolism	odema
History.	Risk factors.	- old - Dilated CMP - IHD
	No cript	criptation
ECG	~~ECG~~ Sinus Tachy RBBB Rt. axis	* ST elevation Ischemia, arrythmia
Chest x-ray	Normal.	* Patter fly venous congestion in upper lobe.
Responce to Diuretics.		* Dramatic improvent by ~~nitroglycerin~~ Lazix
Sign lung	متغيرة Silent	cripitation wheeze

Pul. odema → ALVF.